



US Army Corps  
of Engineers

# REGIONAL SEDIMENT BUDGETS FOR THE STATE OF FLORIDA

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# TOPICS

- Regional Sediment Management (RSM) Program Overview
- Sediment Budget Definition/Methodology
- Florida Regional Sediment Budgets

# What is Regional Sediment Management?

**RSM** is a Corps-wide approach to watershed sediment management with support from HQ down through the Districts

- Initiated by Coastal Engineering Research Board
- Includes: dredging/placement, structures, erosion protection and mining

**Goal:** solve local sediment-related problems by designing solutions that fit within a regional strategy.

- Retain appropriate material in the littoral zone
- Develop balanced natural systems

# Regional Sediment Management in Florida

## Jacksonville District RSM Activities

- Coordination of O&M Dredging/Beach Nourishment
- Stakeholder/interagency RSM workshops
- RSM GIS database
- Regional Sediment Budgets

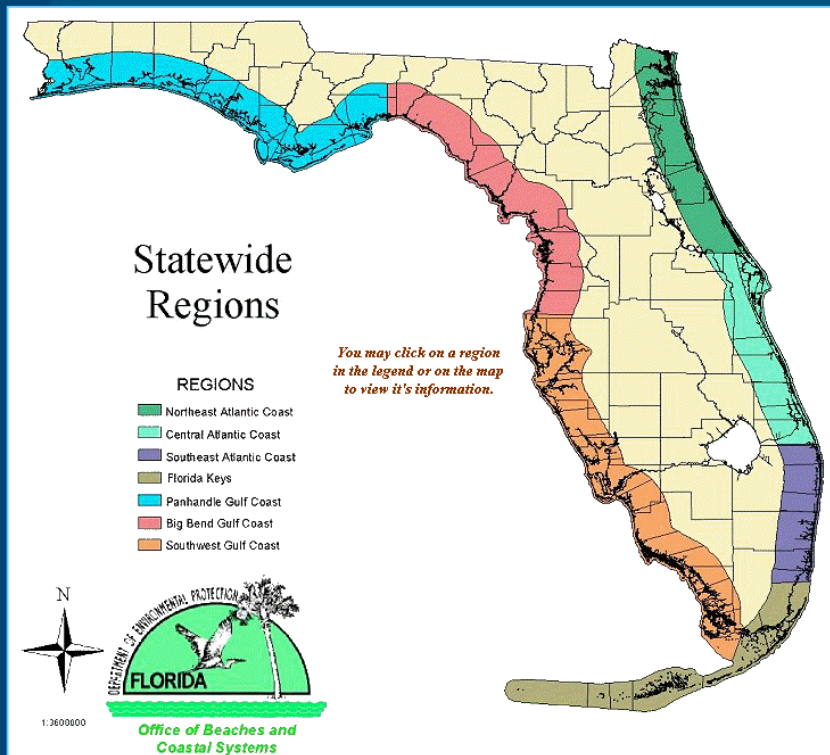
# What is a Sediment Budget?

An accounting of erosion, accretion and sediment transport, both natural and mechanical, within a defined area over a specified time.

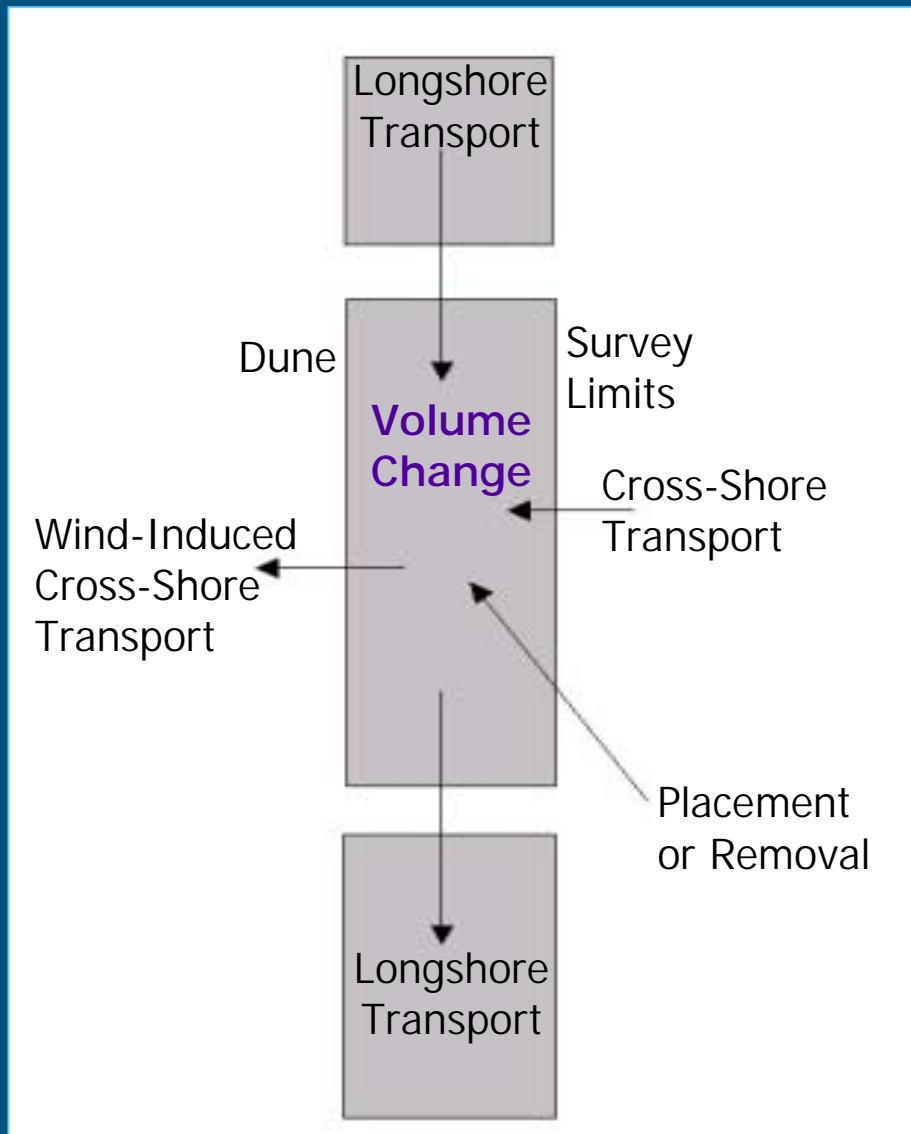
# Why Regional Budgets?

RSM requires an inventory of data and analysis of coastal processes on a regional scale.

# Methodology

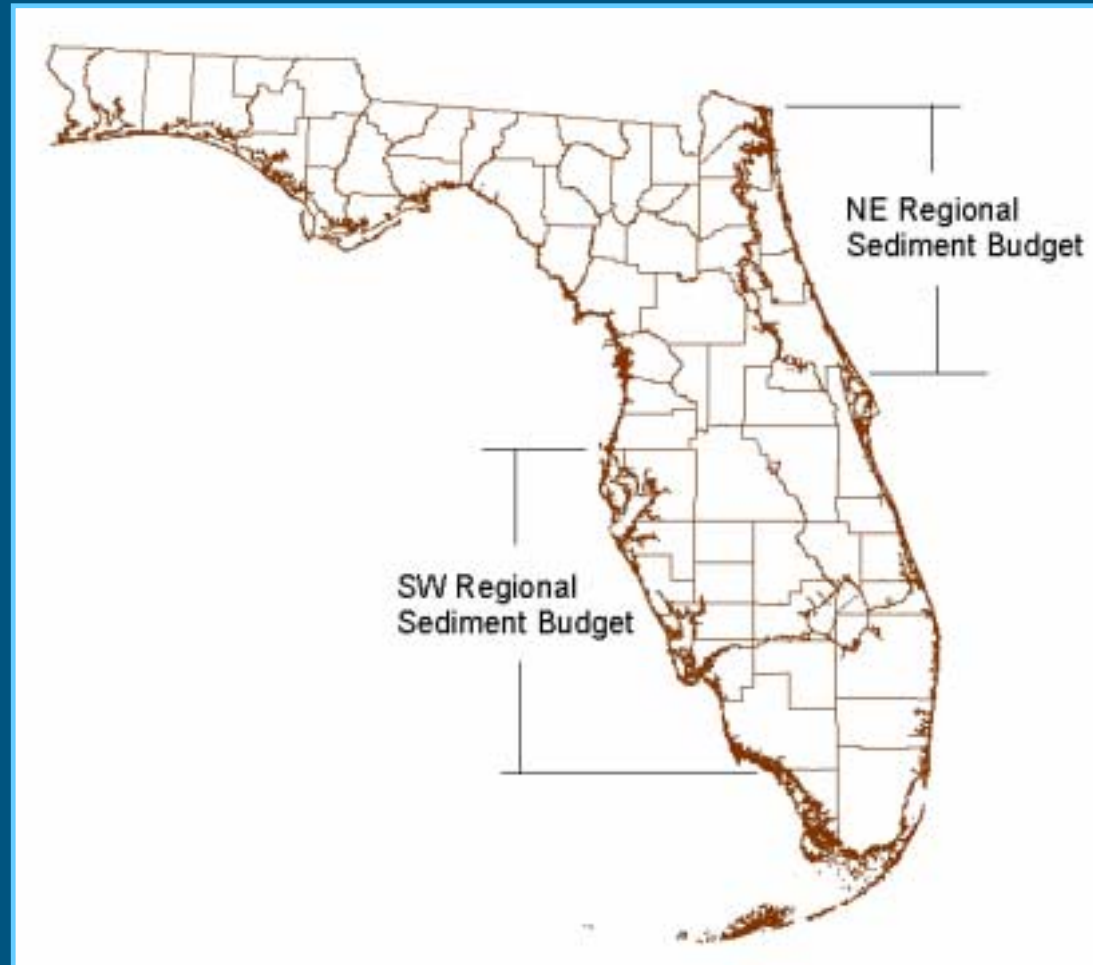


- Define regional boundaries
- Conduct literature review
- Specify an input data time-frame
- Subdivide region into sediment 'cells'
- Input all existing littoral data
- Fill data gaps with new analysis
- Apply Sediment Budget Analysis System (SBAS)
  - Balance the budget
  - Produce graphic representation



# Typical Schematic

# Florida Regional Sediment Budgets

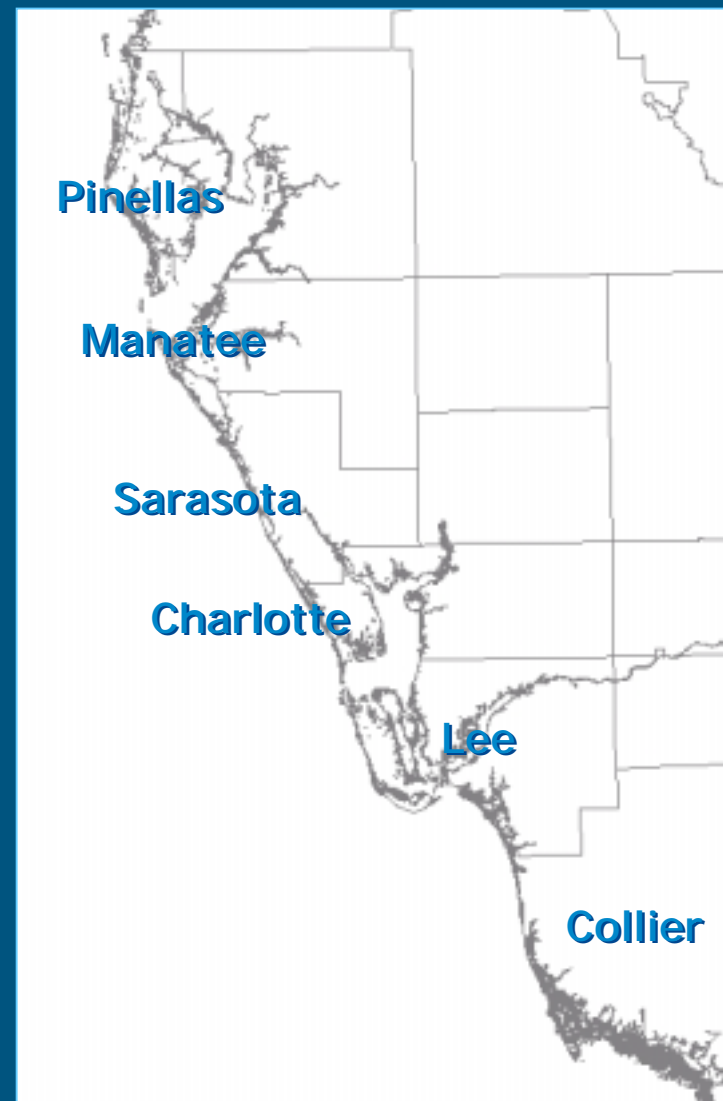


**Regional Sediment Management**

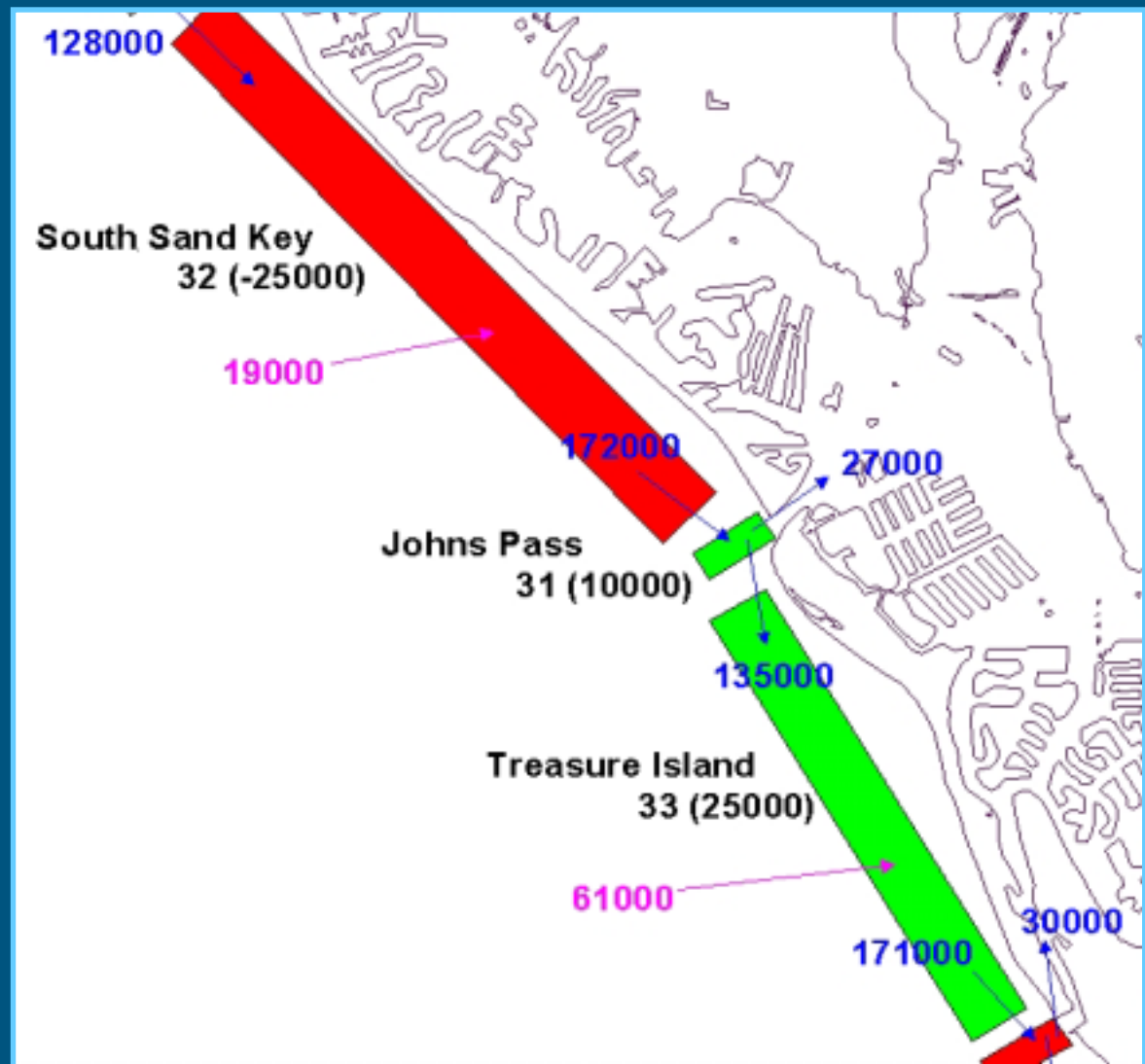


# Southwestern Florida Regional Sediment Budget

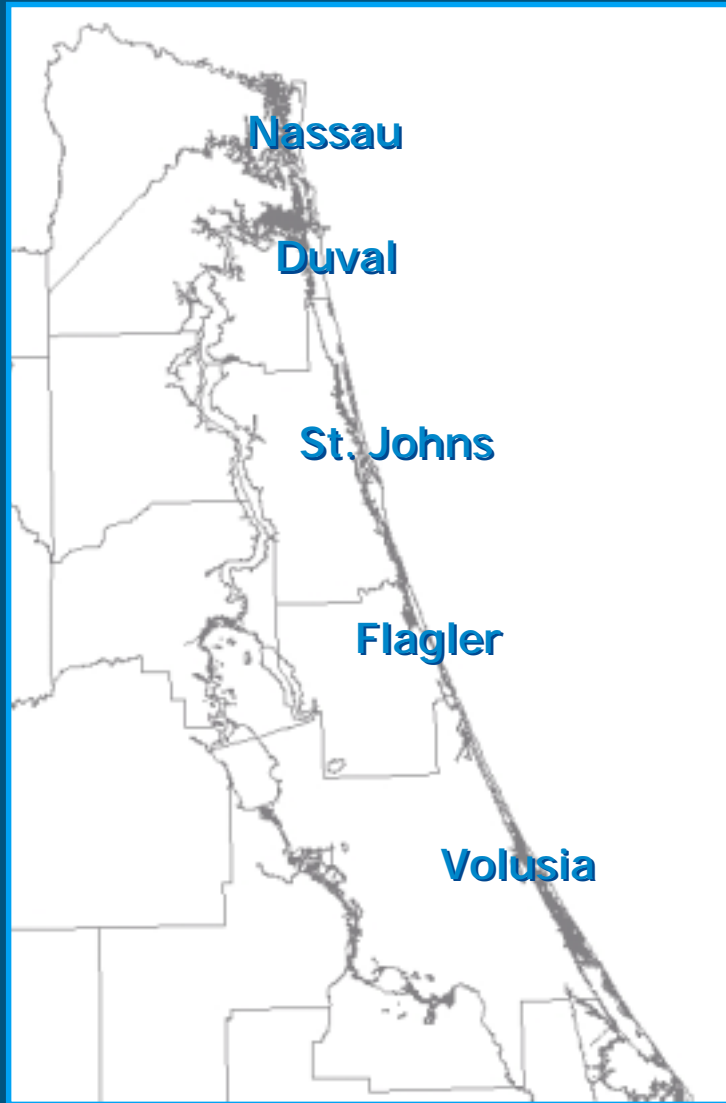
- Pinellas County through Collier County, 180 coastal miles
- A part of the Gulf of Mexico RSM Initiative (GOMEX)
- Data Sources: previous studies, surveys, shoreline change, historic dredge and nourishment records
- Developed for the Corps of Engineers by Taylor Engineering



# SW Florida Regional Sediment Budget



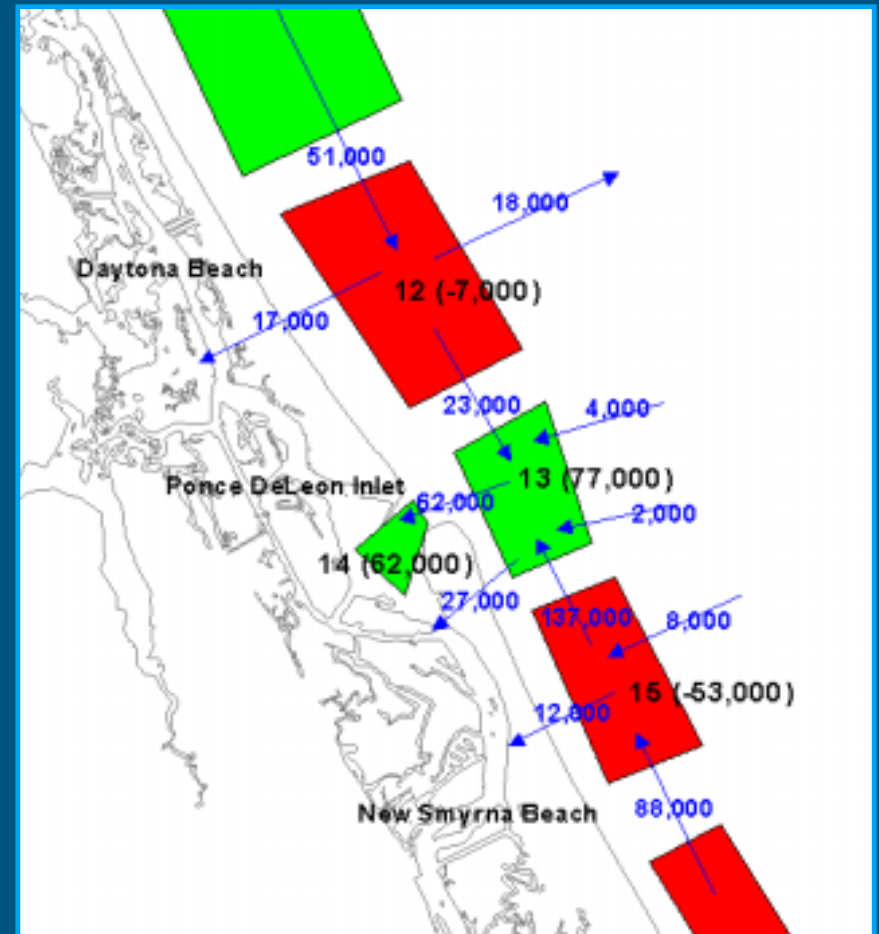
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## NE Florida Regional Sediment Budget

- 150 miles of the Atlantic Coast from the GA/FL border south through Volusia County
- Data sources: Shore Protection/Inlet Management Reports, Shoreline Change Reports, etc. New Analysis

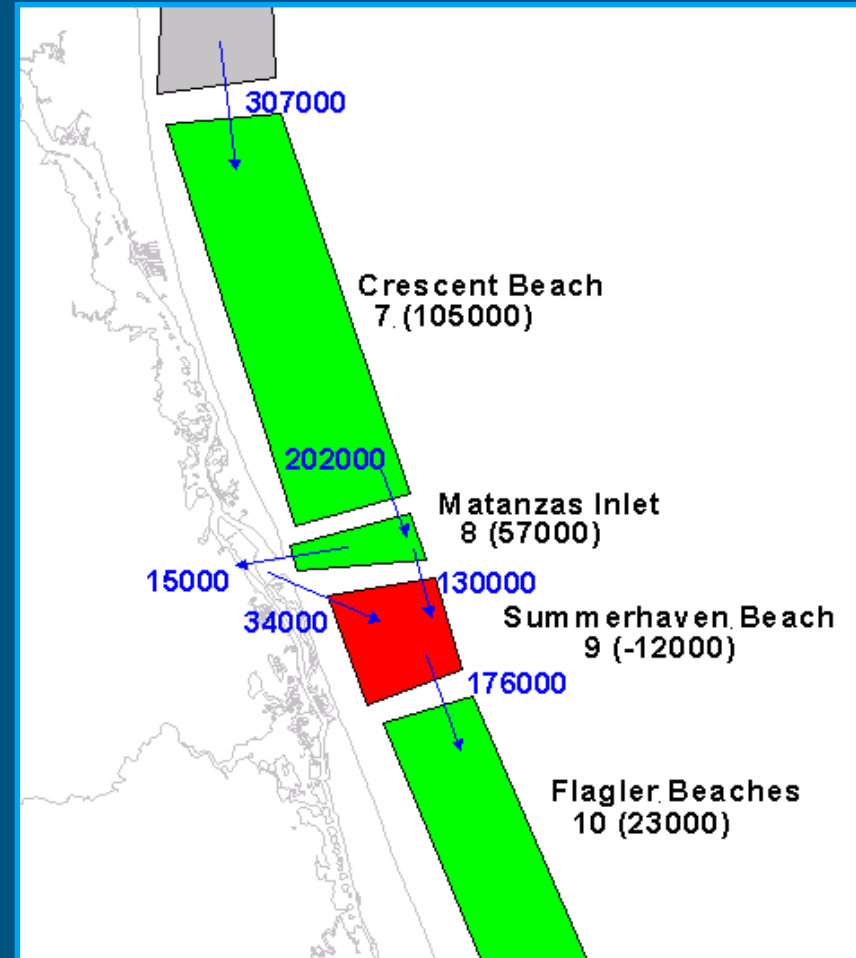
# Ponce De Leon Inlet, Volusia County



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# Matanzas Inlet, St Johns County



# Future Work

- Short Term Goal: incorporate new projects and new data into the budgets to keep them current
- Long Range Goal: develop a regional coastal processes model for each region

# Summary

- RSM in Florida means:
  - Retaining beach quality sand in the littoral zone
  - Fostering balanced systems
- Regional sediment budgets:
  - Data integrated from diverse sources
  - Single, regional model of sediment distribution
  - Updates for new data, and analyses

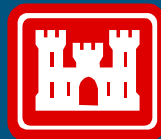
# THANK YOU

<https://rsm.saj.usace.army.mil>

- Florida Regional Sediment Budgets
  - Other Florida RSM information

[www.wes.army.mil/rsm](http://www.wes.army.mil/rsm)

- RSM Publications



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